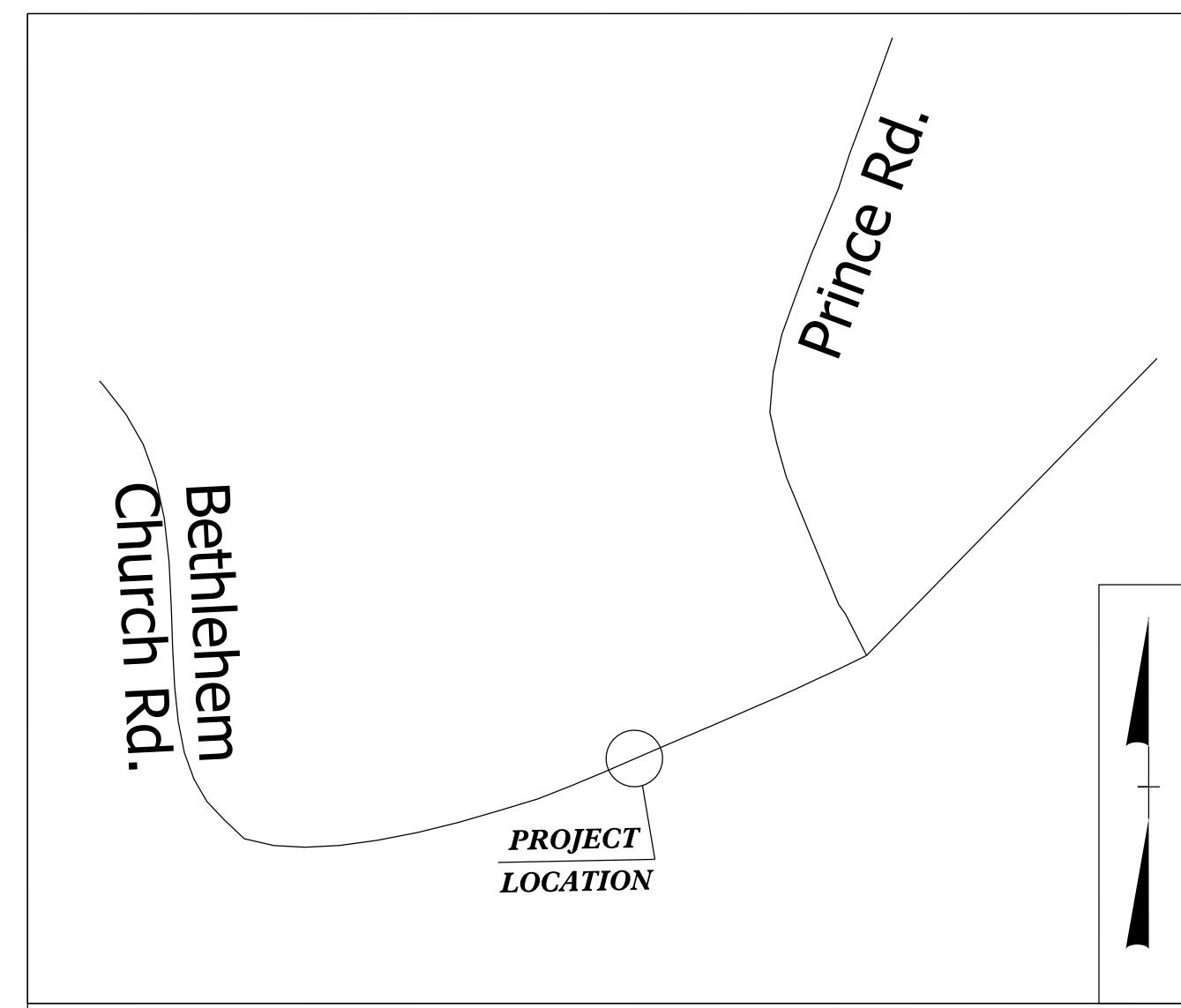


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-6046	RW01	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

SURVEY CONTROL, EXISTING CENTERLINES,  
RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

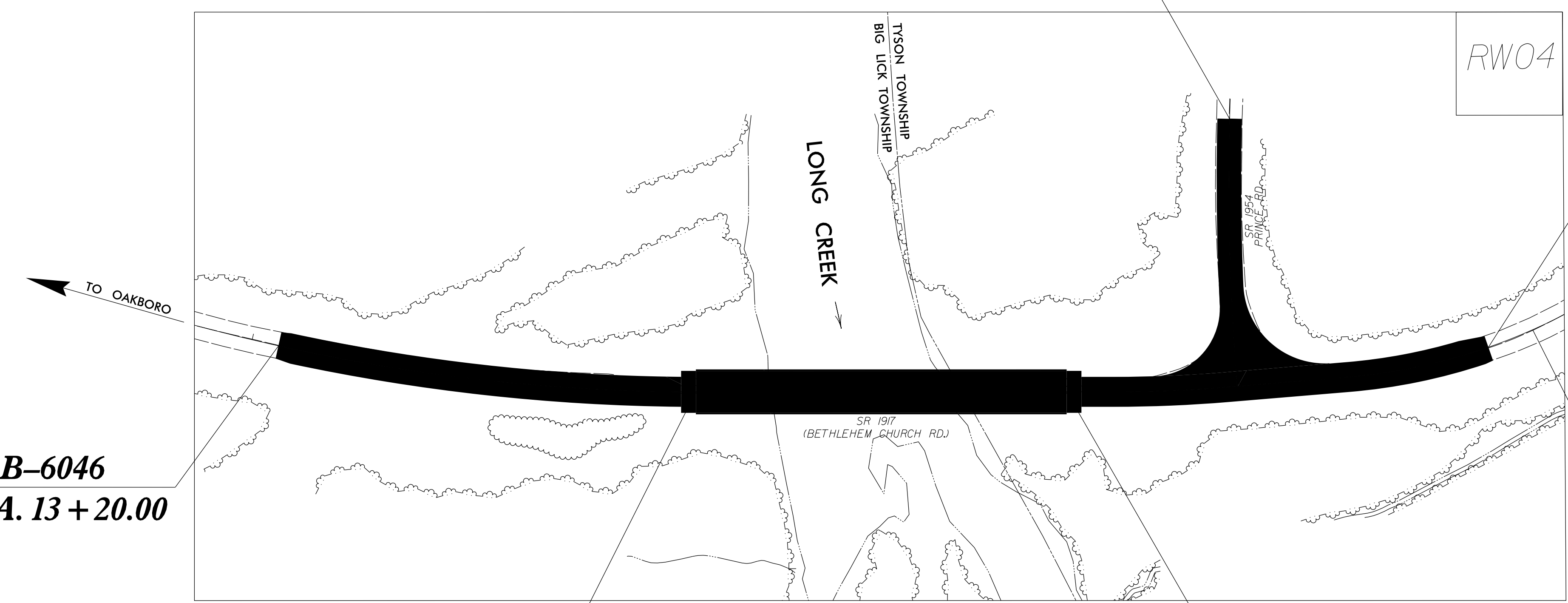
**STANLY COUNTY**



**VICINITY MAP**  
(Not to Scale)

**TIP PROJECT: B-6046**

**BEGIN CONSTRUCTION**  
-Y- POC STA. 10+00.00



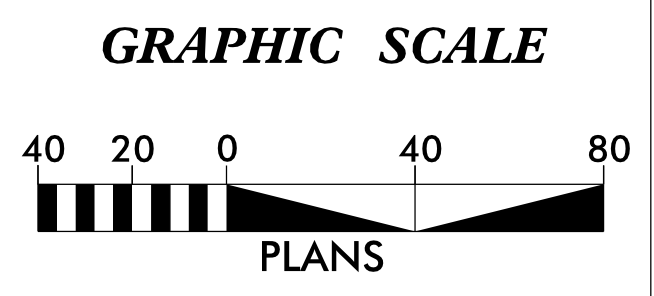
**BEGIN TIP B-6046**  
-L- POC STA. 13+20.00

**END TIP B-6046**  
-L- POC STA. 22+15.00

**BEGIN BRIDGE**  
-L- STA. 16+29.26

**END BRIDGE**  
-L- STA. 19+01.89

NOT TO SCALE



**DATUM DESCRIPTION**  
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B6046-1" WITH NAD 83/2011 STATE PLANE GRID COORDINATES OF NORTHING: 540,471.615 (ft) EASTING: 1,626,587.533 (ft) ELEVATION: 505.886(ft)  
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999853245  
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B6046-1" TO -L- STATION 23+86.84 IS S 56°51'23" W 2463.82 (ft)  
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:



Dewberry Engineers Inc.  
5900 Harris Corner Pkwy - Suite 220  
Charlotte, NC 28269  
Phone: 704.509.9918  
Fax: 704.509.9927  
www.dewberry.com  
NCBELS #F-6929

2018 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
04/01/22

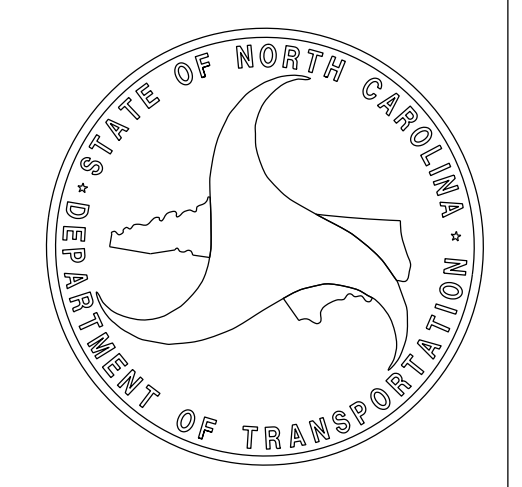
**LETTING DATE:**  
12/2023

PROFESSIONAL LAND SURVEYOR



DocuSigned by:  
Gavin Proffitt, PLS  
AD48B3C3B8A4C7


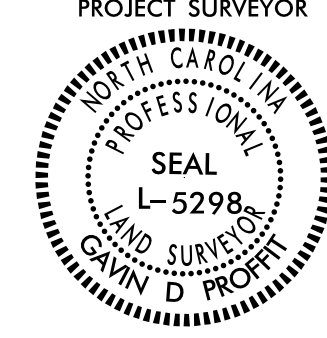
Date: 7/5/2022

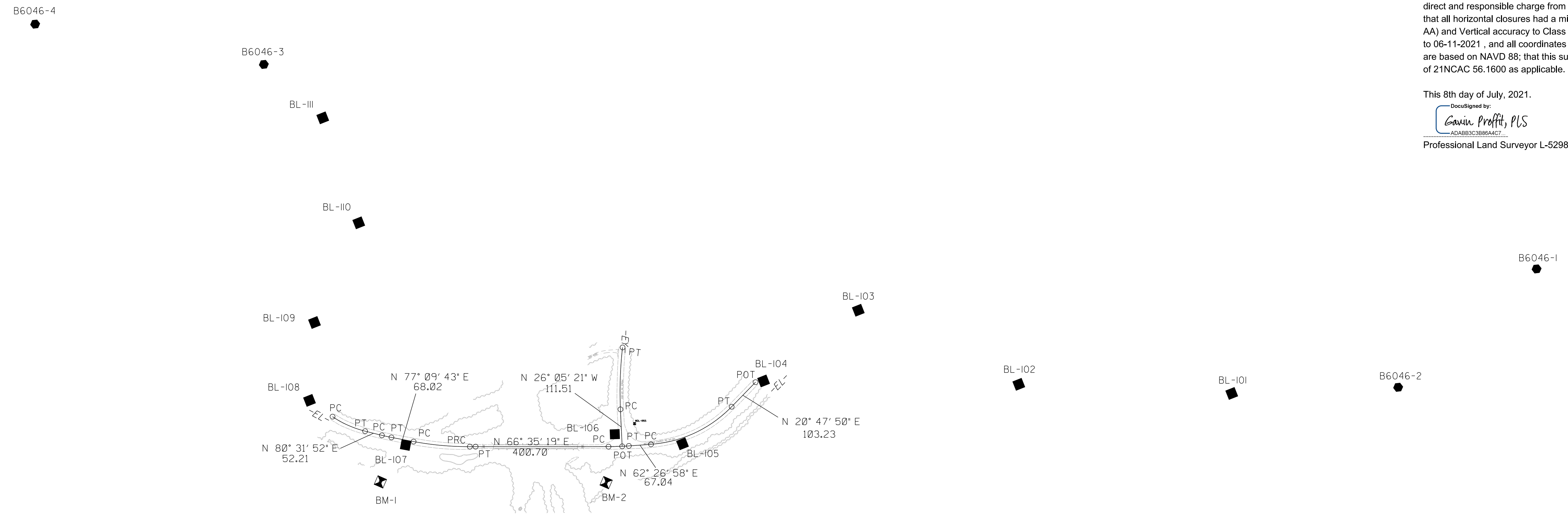
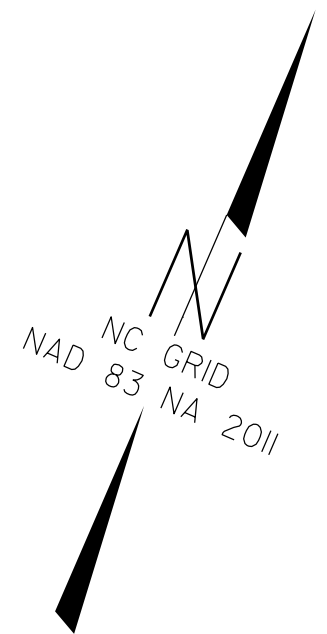


05-JUL-2022 11:39  
P:\5052137\CAD\Survey\B6046\RW\_files\B6046\_ls\_rw01.dgn  
GP-Proffit

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
B-6046	rw2c-1
<b>Location and Surveys</b>	
 <small>Dewberry Engineers Inc. 8000 Harris Corner Pkwy - Suite 200 Charlotte, NC 28226 Phone: 704.248.2818 Fax: 704.248.2955 www.dewberry.com NCELS # 47680</small>	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



I, Gavin D. Proffit, PLS, certify that the Project Control was verified under my supervision from an actual survey made under my supervision and the following information was used to perform the survey:

Localized around: B-6046-1  
 Northing: 540471.6154  
 Easting: 1626587.5331  
 Combined grid factor: 0.999853245  
 Geoid model: GEOID12B  
 Units: US Survey Feet

I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 04-15-2021 to 06-11-2021, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 8th day of July, 2021.

DocuSigned by:  
  
 Professional Land Surveyor L-5298

SEE SHEET RW2C-3  
 FOR FURTHER  
 ALIGNMENT DETAILS

### NOTES:


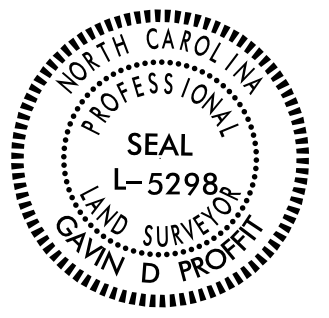
1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

REVISIONS

05-JUL-2022 11:52 AM  
P:\50152137\CAD\Survey\B6046\RW f\_1\les\B6046\_1\l-rw2c-2.dgn  
GP of fit AT PF14B77A

# SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

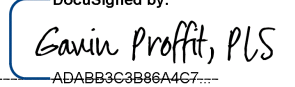
PROJECT REFERENCE NO.	SHEET NO.
B-6046	rw2c-2
<b>Location and Surveys</b>	
	
<small>Dewberry Engineers Inc. 800 North Center Hwy - 540-200 Durham, NC 27608 Phone: 704.248.0918 Fax: 704.248.0915 www.dewberry.com NCELS #10080</small>	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Gavin D. Proffit, PLS, certify that the Project Control was verified under my supervision from an actual survey made under my supervision and the following information was used to perform the survey:

Localized around: B-6046-1  
Northing: 540471.6154  
Easting: 1626587.5331  
Combined grid factor: 0.999853245  
Geoid model: GEOID12B  
Units: US Survey Feet

I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 04-15-2021 to 06-11-2021, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 8th day of July, 2021.

DocuSigned by:  
  
Professional Land Surveyor L-5298

BL	POINT	DESC.	NORTH	EAST	ELEVATION
1		B6046-1	540471.6150	1626587.5330	505.89
2		B6046-2	539978.4700	1626346.2000	466.97
BL101		BL-101	539761.9730	1625892.9480	432.34
BL102		BL-102	539532.1300	1625292.8200	384.50
BL103		BL-103	539544.6740	1624760.0720	352.53
BL104		BL-104	539235.7330	1624582.6220	334.98
BL105		BL-105	538964.7750	1624433.4680	314.42
BL106		BL-106	538910.1580	1624234.7820	291.22
BL107		BL-107	538629.6280	1623668.9390	306.19
BL108		BL-108	538637.9700	1623349.5050	346.61
BL109		BL-109	538859.2870	1623270.0780	368.53
BL110		BL-110	539187.9510	1623273.1370	381.20
BL111		BL-111	539435.0810	1623047.8650	397.86
3		B6046-3	539512.2490	1622820.9960	413.10
4		B6046-4	539349.7010	1622139.9790	431.63

.....  
BM1 ELEVATION - 304.00  
N 538498 E 1623643  
RR SPIKE IN THE BASE OF A 15' OAK  
.....

.....  
BM2 ELEVATION - 288.19  
N 538766 E 1624269  
RR SPIKE IN BASE OF 15' SYCAMORE TREE  
.....

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.


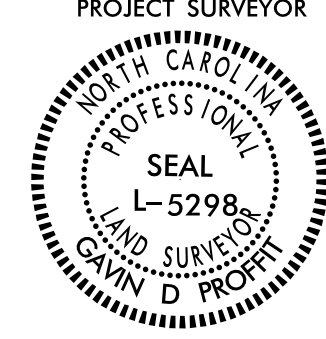
6/2/19

REVISIONS

05-JUL-2022 11:52 AM  
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GP of f.t AT PF14B77A

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. B-6046	SHEET NO. rw2c-3
<b>Location and Surveys</b>	
 <small>Dewberry Engineers Inc. 800 North Center Pkwy - Suite 200 Durham, NC 27608 Phone: 704.266.0918 Fax: 704.266.0915 www.dewberry.com NCELS #10080</small>	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Gavin D. Proffit, PLS, certify that the Project Control was verified under my supervision from an actual survey made under my supervision and the following information was used to perform the survey:

Localized around: B-6046-1  
Northing: 540471.6154  
Easting: 1626587.5331  
Combined grid factor: 0.999853245  
Geoid model: GEOID12B  
Units: US Survey Feet

I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 04-15-2021 to 06-11-2021, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 8th day of July, 2021.

DocuSigned by:  
  
AD4883C3886A627  
Professional Land Surveyor L-5298


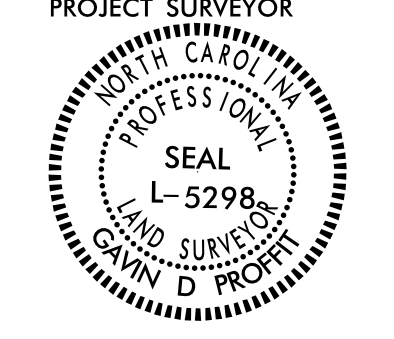
EL									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PC	538620.723	1623432.833							
CURVE			S 89°20'49.5" E	107.46	20°14'37.7"(LT)	18°44'26.1"	108.02	54.58	305.73
PT	538619.499	1623540.286							
LINE			N 80°31'51.6" E	52.21					
PC	538628.088	1623591.784							
CURVE			N 78°50'47.3" E	29.40	03°22'08.6"(LT)	11°27'33.0"	29.40	14.70	500.00
PT	538633.774	1623620.625							
LINE			N 77°09'43.1" E	68.02					
PC	538648.888	1623686.944							
CURVE			N 71°46'31.2" E	170.24	10°46'23.8"(LT)	06°19'08.9"	170.49	85.50	906.70
PCC	538702.128	1623848.641							
CURVE			N 66°29'18.9" E	17.44	00°11'59.3"(RT)	01°08'45.3"	17.44	8.72	5000.00
PT	538709.084	1623864.629							
LINE			N 66°35'18.5" E	400.70					
PC	538868.295	1624232.342							
CURVE			N 64°31'08.3" E	61.39	04°08'20.5"(LT)	06°44'26.4"	61.40	30.72	850.00
PT	538894.706	1624287.760							
LINE			N 62°26'58.1" E	67.04					
PC	538925.714	1624347.199							
CURVE			N 41°37'24.2" E	268.20	41°39'07.7"(LT)	15°11'25.2"	274.20	143.48	377.19
PT	539126.203	1624525.348							
LINE			N 20°47'50.4" E	103.23					
POT	539222.707	1624562.001							

EY									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	538885.588	1624269.766							
LINE			N 26°05'21.1" W	111.51					
PC	538985.740	1624220.725							
CURVE			N 21°26'49.5" W	186.65	09°17'03.2"(RT)	04°58'07.7"	186.85	93.63	1153.11
PT	539159.462	1624152.480							

### NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

# PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
B-6046	RW02D-1
<b>Location and Surveys</b>	
 <b>Dewberry</b> <small>Dewberry Engineers Inc.          930 West Center Street, Suite 200          Raleigh, NC 27609          Phone: 704.288.8999          Fax: 704.288.9977          www.dewberry.com          NCELS #9-089</small>	
PROJECT SURVEYOR  Gavin D. Proffit PLS L-5298	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

REVISIONS

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CP-0111 AT PF14B77A

I, Gavin D. Proffit, PLS, certify that the data compiled came from available survey/mapping performed by others and provided to me by NCDOT and do not certify to the accuracy or quality of the individual data sources.

Witness my original signature, registration number and seal this 12th day of May, 2022.

L			
TYPE	STATION	NORTH	EAST
PC	10+00.00	538697.6040	1623322.7922
PCC	11+19.45	538624.6118	1623413.2815
PCC	12+34.41	538617.9267	1623527.3615
PT	16+31.70	538723.4194	1623909.0592
PC	19+36.78	538844.6249	1624189.0333
PT	20+19.93	538880.7904	1624263.8767
PC	21+09.28	538922.9780	1624342.6467
PCC	22+54.94	539012.4302	1624456.6703
PT	23+86.84	539124.5517	1624524.5687
POT	25+03.91	539019.9493	1624577.1561

DocuSigned by:  
  
 ADAB85C3888AEC7  
 Professional Land Surveyor

L-5298  
PLS #


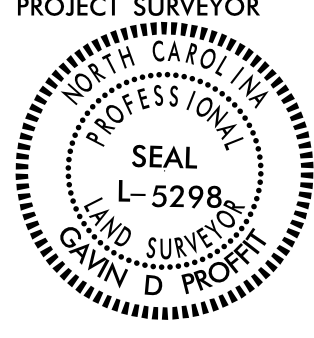
Y1			
TYPE	STATION	NORTH	EAST
PC	10+00.00	539076.4279	1624181.7525
PT	11+83.04	538909.7763	1624257.2846
POT	12+11.71	538884.2830	1624270.3979

### NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 05/2022 TO 05/2022 .

REVISIONS

# RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO. B-6046	SHEET NO. RW03E-1
<b>Location and Surveys</b>	
 Dewberry Engineers Inc. <small>550 West Covert Blvd., Suite 200                  Raleigh, NC 27605                  Phone: 704.268.8900                  Fax: 704.268.8977                  www.dewberry.com                  NCELS #9-089</small>	
PROJECT SURVEYOR  Gavin D. Proffit PLS L-5298	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	13+30.00	29.56	538604.5605	1623627.4495
L	13+30.00	50.00	538584.5178	1623631.4619
L	13+30.00	-30.46	538663.4138	1623615.6675
L	13+30.00	-50.00	538682.5722	1623611.8321
L	16+31.70	50.00	538677.5347	1623928.9235
L	16+31.70	-50.00	538769.3042	1623889.1950
L	19+36.78	50.00	538798.7401	1624208.8976
L	19+36.78	-50.00	538890.5096	1624169.1690
L	19+70.00	-50.00	538903.5264	1624197.9172
L	20+19.93	50.00	538836.7139	1624287.4831
L	20+68.30	-50.00	538947.7029	1624282.9081
L	21+09.28	50.00	538878.9015	1624366.2531
L	21+90.00	50.00	538928.9214	1624441.3058
L	21+90.00	30.77	538943.8219	1624429.1570
L	22+00.00	-50.00	539012.0724	1624384.8745
L	22+50.00	-29.54	539028.7784	1624431.6113

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	10+15.00	-29.29	539073.4731	1624214.4697
Y1	10+50.00	30.56	539018.1865	1624172.6248
Y1	10+50.00	-40.00	539045.8643	1624237.5340
Y1	11+00.00	40.00	538967.7731	1624184.6148
Y1	11+50.00	40.00	538921.6373	1624206.5415

I, Gavin D. Proffit, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work items (R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.



I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

Witness my original signature, registration number and seal this 12th day of May, 2022.

DocuSigned by:  
  
 ADAB83C3B80A4C7  
 Professional Land Surveyor L-5298  
 PLS #

**NOTES:**

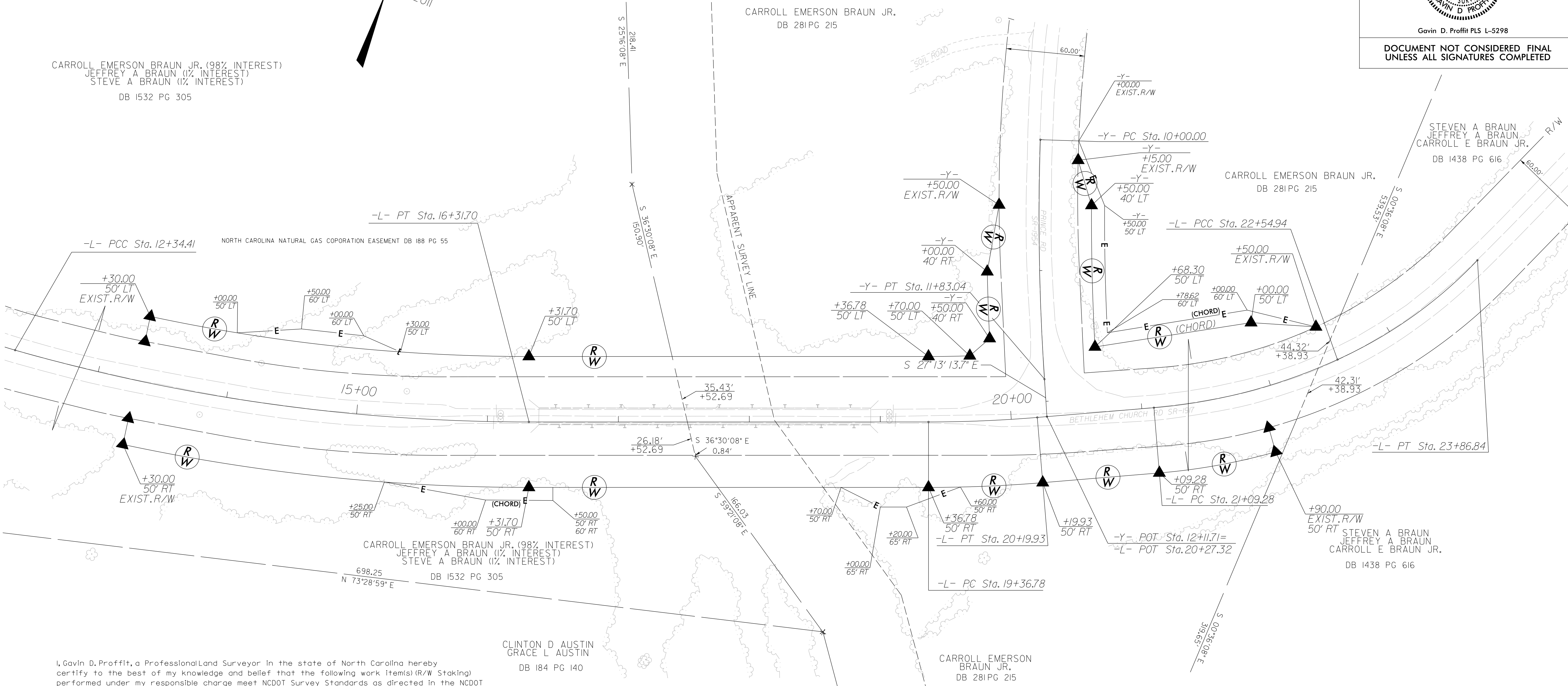
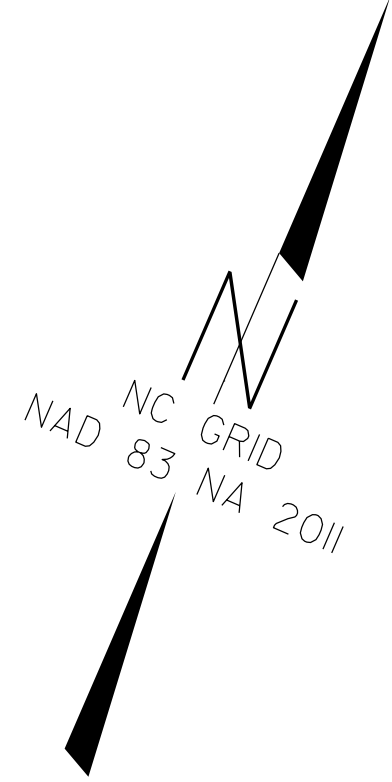
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 03/2022 TO 04/2022 .

PROJECT REFERENCE NO. B-6046	SHEET NO. RW04
<b>Location and Surveys</b>	
	
<small>Dewberry Engineers Inc. 200 West Century Street, Suite 200 Raleigh, NC 27601 Phone: 919.888.8888 Fax: 919.888.8889 www.dewberry.com NCELS # 008</small>	
	
Gavin D. Proffit PLS L-5298	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

-L- CURVE DATA					
PI Sta 10+63.17 Δ = 46° 04' 12.6" (LT) D = 38° 34' 05.7" L = 119.45' T = 63.17' R = 148.56' SE = EXIST.	PI Sta 11+77.63 Δ = 2° 41' 19.4" (LT) D = 18° 51' 58.3" L = 114.96' T = 58.18' R = 303.70' DS = 30 MPH**	PI Sta 14+34.34 Δ = 15° 55' 04.7" (LT) D = 4° 00' 24.1" L = 397.28' T = 199.93' R = 1,430.00' DS = 50 MPH*	PI Sta 19+78.38 Δ = 4° 45' 50.3" (LT) D = 5° 43' 46.5" L = 83.15' T = 41.60' R = 1,000.00' DS = 50 MPH*	PI Sta 21+82.85 Δ = 19° 53' 01.2" (LT) D = 13° 39' 04.6" L = 145.65' T = 73.57' R = 419.71' DS = 35 MPH**	PI Sta 23+21.72 Δ = 22° 09' 11.2" (LT) D = 16° 47' 44.2" L = 131.90' T = 66.78' R = 341.14' SE = EXIST.

-Y- CURVE DATA
PI Sta 10+91.60 Δ = 5° 40' 39.5" (LT) D = 3° 06' 06.4" L = 183.04' T = 91.60' R = 1,847.19' SE = EXIST.

\* MEETS SUBREGIONAL TIER DESIGN GUIDELINES  
\*\* TYING TO EXISTING ALIGNMENT



I, Gavin D. Proffit, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

Witness my original signature, registration number and seal this 12th day of May, 2022.

DocuSigned by:  
**Gavin Proffit, PLS**  
L-5298  
Professional Land Surveyor PLS #

- NOTES:**
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
  2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
  3. RIGHT OF WAY MONUMENTATION ESTABLISHED 05/2022 TO 05/2022 .

REVISIONS

6/2/2022 11:33 S:\urvey\6046\RW files\6046\_14\_rw04.dgn  
6/2/2022 11:33 S:\urvey\6046\RW files\6046\_14\_rw04.dgn  
6/2/2022 11:33 S:\urvey\6046\RW files\6046\_14\_rw04.dgn